

FIG. 1A



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**FIG. 1B-2**

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250 Gln    Val Arg Ser Ser Leu Glu    Asn Thr Thr Thr Lys Leu Gly Asp Ser Phe Tyr Gly Lys Gly Leu Ile Asn  
 1149 CAA GTC CGC AGC AGT TTA GAA AAC ACC ACT ACA AAA CTT GGT GAT TCT TTC TAC TAT GGA AAA GGG CTG ATC AAC  
 270  
 Val Gln Ala Ala Ala Gln OC  
 1224 GTA CAG GCG GCA GCT CAG TAA AACATAAAAAACCGGCCTTGCCCGCGGGTTTATTTTCTCTCCGCATGTCATCGCGTCC  
 1316 ATATCGACGGATGGCTCCCTCTGAAATTTTAACGAGAAACGGCGGGTTGACCCCGGCTCAGTCCCGTAACGGCCAACTCCTGAAACGGTCTCAATCGCGG  
 1416 CTCCCCGGTTCCGGTCAGCTCAATGCCGTACCGGTCCGGCGGGTTTCTGATACCGGGAGACGGCATTCTGTAATCGGATC

FIG.. 1B - 3

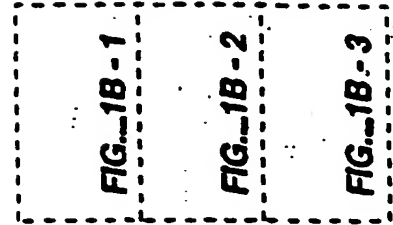


FIG.. 1B

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CONSERVED RESIDUES IN SUBTILISINS FROM  
*BACILLUS AMYLOLIQUEFACIENS*

1	10	20
A Q S V P . G . . . . .	A P A . H . . .	G
21	30	40
. T G S . V K V A V . D . G . . . . .	H P	
41	50	60
D L . . . G G A S . V P . . . . .	Q D	
61	70	80
. N . H G T H V A G T . A A L N N S I G		
81	90	100
V L G V A P S A . L Y A V K V L G A . G		
101	110	120
S G . . S . L . . G . E W A . N . . . . .		
121	130	140
V . N . S L G . P S . S . . . . .	A . .	
141	150	160
. . . . . G V . V V A A . G N . G . . . .		
161	170	180
. . . . . Y P . . Y . . . . .	A V G A .	
181	190	200
D . . N . . A S F S . . G . . L D . . A		
201	210	220
P G V . . Q S T . P G . . Y . . . . .	N G T	
221	230	240
S M A . P H V A G A A A L . . . . .	K . . .	
241	250	260
W . . . Q . R . . L . N T . . . . .	L G . .	
261	270	
. . Y G . G L . N . . A A . . .		

FIG.\_2

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## COMPARISON OF SUBTILISIN SEQUENCES FROM:

*B. amyloliquefaciens**B. subtilis**B. licheniformis**B. lentus*

01	10	20	30	
1 Q S V P Y G V S Q I K A P A L H S Q G Y T G S N V K V A V I D S G I D S S H P P				
A Q S V P Y G I S Q I K A P A L H S Q G Y T G S N V K V A V I D S G I D S S H P P				
A Q T V P Y G I P L I K A D K V Q A Q G F K G A N V K V A V L D T G I Q A S H P P				
A Q S V P W G I S R V Q A P A A H N R G L T G S G V K V A V L D T G I S T * H P P				

41	50	60	70	
D L K V A G G A S S H V P P S E T N P P F Q D N N S H G T H V A G T V A A L N N S I G				
D L N V R G G A S S F V P P S E T N P P Y Q D G S S H G T H V A G T I A A L N N S I G				
D L N V V G G A S S F V A G E A Y N * T D G N G H G T H V A G T V A A L D N T T G				
D L N I R G G A S S F V P P G E * P S T Q D G N G H G T H V A G T I A A L N N S I G				

81	90	100	110	
V L G V A P S A S L Y A V K V L G A D G S G Q Y S W I I N G I E W A I A N N M M D				
V L G V S P S A S L Y A V K V L D S S T G S G Q Y S W I I N G I E W A I S N N M M D				
L G V A P S V S L Y A V K V L N S S G S G S Y S G I V S G I E W A T T N G M M D				
V L G V A P S A E L Y A V K V L Q A S G S G S V S S I A Q G L E W A G N N G M H				

121	130	140	150	
V I N M S L G G P S G S A A L K A A V D K A V A S G V V V A A A G N E G T S G				
V I N M S L G G P T G S T A L K T V V D K A V S S G I V V A A A A G N E G S S G				
V I N M S L G G A S G S T A M K Q A V D N A Y A R G V V V A A A A G N S G N S G				
V A N L S L G S P S A T L E Q A V N S A T S R G V L V V A A A A G N S G A G S				

FIG. 3A

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161  
 170  
 180  
 190  
 S S S T V G Y P G K Y P S V I A V G A V D S S N Q R R A S F S S V G P E L D V M A  
 S T S T V G Y P A K Y P S T I A V G A V N S S N Q R R A S F S S A G S E L D V M A  
 S T N T I G Y P A K Y D S V I A V G A V D S S N S N R R A S F S S V G A E L E V M A  
 \* \* \* I S Y P A R Y A N A M A V G A T D Q N N R R A S F S S Q Y G A G L D I V A

201  
 210  
 220  
 230  
 P G V S I Q S T L P G N K Y G A Y N G T S M A S P H V A G A A A L I L S K H P N  
 P G V S I Q S T L P G G T Y G A Y N G T S M A T P H V A G A A A L I L S K H P T  
 P G A G V Y S T Y P T N T Y A T L N G T S M A S P H V A G A A A L I L S K H P N  
 P G V N V Q S T Y P G S T Y A S L N G T S M A T P H V A G A A A L V K Q K N P S

241  
 250  
 260  
 270  
 W T N T Q V R S S L E N T T T K L G D S F Y Y G K G L I N V Q A A A Q  
 W T N A Q V R R L E S T A T T Y L G N S F Y Y G K G L I N V Q A A A Q  
 L S A S Q V R R L S S T A T Y L G S S F Y Y G K G L I N V E A A A Q  
 W S N V Q I R N H L K N T A T S L G S T N L Y G S G L V N A E A A T R

FIG..3B

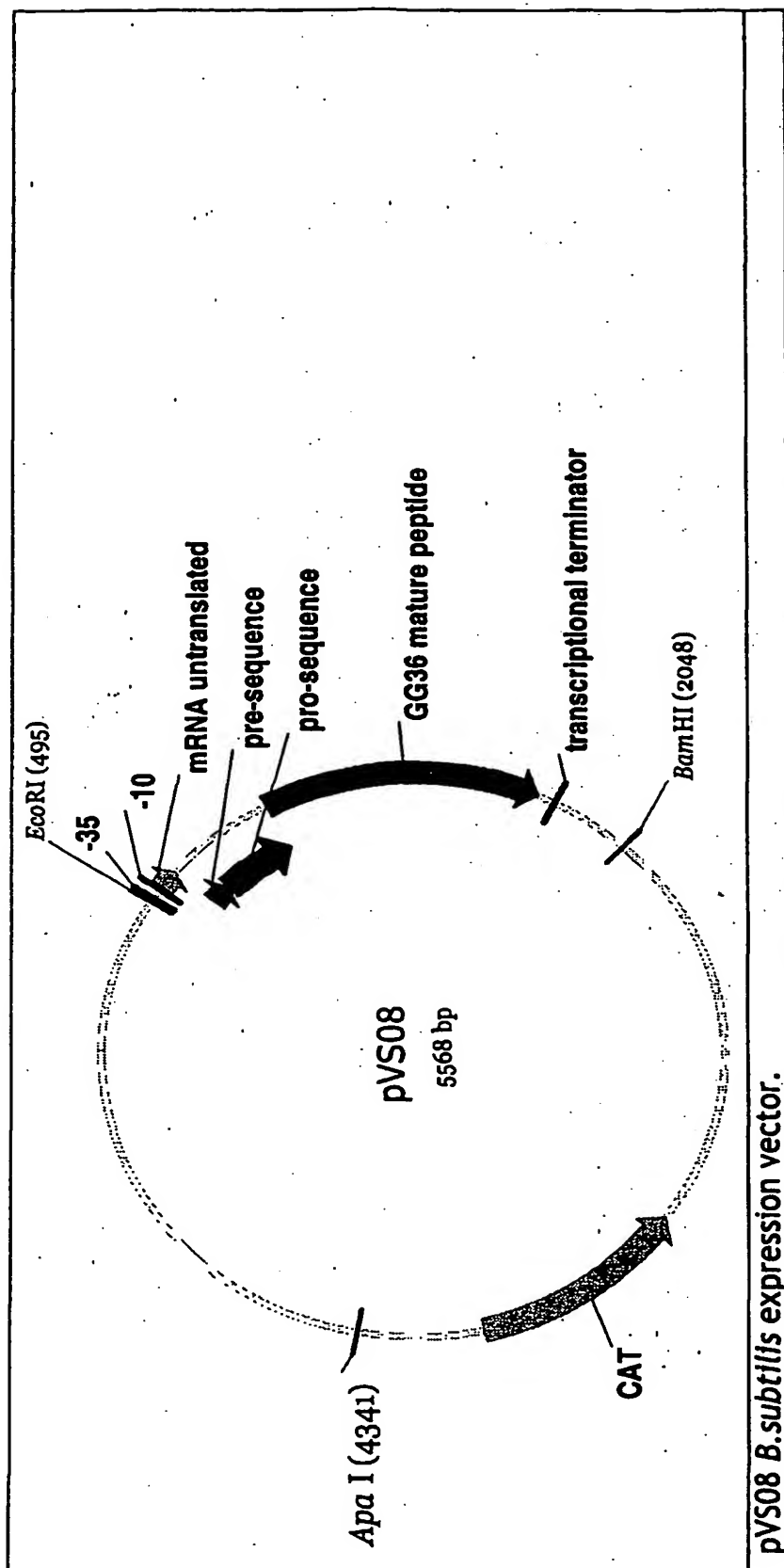
FIG..3

FIG..3A

FIG..3B

FIG.- 4

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FIG.- 5

